SYRINGA WATER AND SEWER (PWSNO 1280271) SOURCE WATER ASSESSMENT REPORT

November 15, 2000



State of Idaho Department of Environmental Quality

Disclaimer: This publication has been developed as part of an informational service for the source water assessments of public water systems in Idaho and is based on data available at the time and the professional judgement of the staff. Although reasonable efforts have been made to present accurate information, no guarantees, including expressed or implied warranties of any kind, are made with respect to this publication by the State of Idaho or any of its agencies, employees, or agents, who also assume no legal responsibility for the accuracy of presentations, comments, or other information in this publication. The assessment is subject to modification if new data is produced.

Executive Summary

Under the Safe Drinking Water Act Amendments of 1996, all states are required by the U.S. Environmental Protection Agency to assess every source of public drinking water for its relative sensitivity to contaminants regulated by the Act. This assessment is based on a land use inventory of the designated assessment area and sensitivity factors associated with the watershed characteristics.

This report, *Source Water Assessment for Syringa Water and Sewer.*, describes the public drinking water system, the zone boundary of water contribution, and the associated potential contaminant sources located within the boundary. This assessment, taken into account with local knowledge and concerns, should be used as a planning tool to develop and implement appropriate protection measures for this source. **The results should <u>not be</u> used as an absolute measure of risk and they should <u>not be</u> used to undermine public confidence in the water system.**

The Syringa Water and Sewer. Public drinking water supply comes from an intake on the north side of Coeur d'Alene Lake. The intake is 80 feet from shore at a depth, which varies with seasonal draw down of the lake level. At low water, the intake is about 59 feet below the surface. The intake is suspended over an underwater cliff. Coeur d'Alene Lake is an unprotected source subject to fluctuations in turbidity from seasonal runoff. The lake is vulnerable to contamination from heavily used roads, from intensive recreational use, and from residential agricultural, timber, mining and other industrial sites on along the lake shore and in the watershed.

This assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what ranking a source receives, protection is always important. Whether the source is currently located in a "pristine" area or an area with numerous industrial and/or agricultural land uses, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

For Syringa Water and Sewer., source water protection efforts should focus on cooperative activities with other public water systems, private and public agencies involved in water quality programs encompassing the entire Coeur d'Alene-St Joe Basin. Partnerships with federal, state and local agencies and industry groups should be established and are critical to success. Due to the fairly short time associated with the movement of surface waters, source water protection activities should be aimed at short-term management strategies with the development of long-term management strategies to counter any future contamination threats

A community with a fully developed source water protection program will incorporate many strategies. For assistance in developing protection strategies please contact your regional IDEQ office or the Idaho Rural Water Association.

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SOURCE WATER ASSESSMENT FOR SYRINGA WATER AND SEWER

Section 1. Introduction - Basis for Assessment

The following sections contain information necessary to understand how and why this assessment was conducted. **It is important to review this information to understand what the ranking of this source means.** A map showing the delineated source water assessment area and the 24 hour emergency response delineation, a map showing the entire watershed contributing to the delineated area, and the inventory of significant potential sources of contamination identified within the delineated area are included. Significant potential contaminant sources found in the delineation are listed and the worksheet used to develop the assessment also is attached.

Background

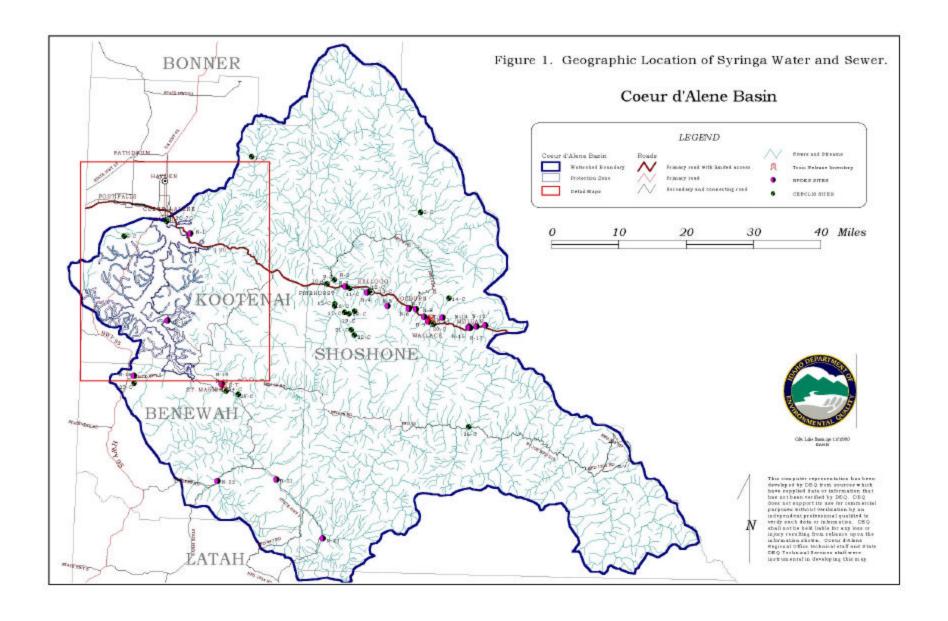
Under the Safe Drinking Water Act Amendments of 1996, all states are required by the U.S. Environmental Protection Agency (EPA) to assess every source of public drinking water for its relative susceptibility to contaminants regulated by the Safe Drinking Water Act. This assessment is based on a land use inventory of the delineated assessment area and sensitivity factors associated with the intakes and watershed characteristics.

Level of Accuracy and Purpose of the Assessment

Since there are over 2,900 public water sources in Idaho, time and resources to accomplish the assessments are limited. All assessments must be completed by May of 2003. An in-depth, site-specific investigation of each significant potential source of contamination is not possible. Therefore, this assessment should be used as a planning tool, taken into account with local knowledge and concerns, to develop and implement appropriate protection measures for this source. The results should <u>not be</u> used as an absolute measure of risk and they should not be used to undermine public confidence in the water system.

The ultimate goal of the assessment is to provide data to local communities to develop a protection strategy for their drinking water supply. The Idaho Department of Environmental Quality (IDEQ) recognizes that pollution prevention activities generally require less time and money to implement than treatment of a public water supply system once it has been contaminated. IDEQ encourages communities to balance resource protection with economic growth and development. The decision as to the amount and types of information necessary to develop a source water protection program should be determined by the local community based on its own needs and limitations. Source water protection is one facet of a comprehensive growth plan, and it can complement ongoing local planning efforts.

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Section 2. Conducting the Assessment

General Description of the Source Water Quality

The Syringa Water and Sewer. water system serves a community of approximately 40 people, located on the north side of Coeur d'Alene Lake. (Figure 1. The Syringa Water and Sewer. drinking water source is an intake in Coeur d'Alene Lake at a depth of about 59 feet during summer low water. The intake is 80 feet from the shore adjacent to Lake Coeur d'Alene Parkway.

The primary water quality issue currently facing Syringa Water and Sewer. is that of contaminants from communities, agriculture, mining and other industries in the Coeur d'Alene-St Joe Basin entering the lake during periods of high runoff. Another concern is nutrient loading from septic systems serving the houses that line the shore.

Defining the Zones of Contribution--Delineation

To protect surface water systems from potential contaminants, the EPA required that the entire drainage basin be delineated upstream from the intake to the hydrologic boundary of the drainage basin (U.S. EPA, 1997b). The EPA recognized that an intake on a large water body could have an extensive drainage basin. Therefore, the EPA recommended that large drainage basins be segmented into smaller areas for the purpose of implementing a cost-effective potential contaminant inventory and susceptibility analysis. The delineation process established the physical area around an intake that became the focal point of the assessment. For Syringa Water and Sewer, a lake buffer zone extending 500 feet from the shoreline around the circumference of the lake was mapped. In addition to the buffer zone around the lake itself, creeks and rivers discharging into the lake were delineated. This stream buffer zone extends from the lake up the rivers or streams and their tributaries to a distance of 25-miles from the intake, or to the 4-hour streamflow time-of-travel boundary, whichever is greater (Figure 2). The entire water surface area of the lake along with the 500' buffer around the lake is also the 24-hour emergency response delineation for Kootenai Syringa Water and Sewer.

A map of the entire watershed, showing locations of highways and any Superfund sites (CERCLIS), Toxic Release Inventory sites or National Pollutant Discharge Elimination System (NPDES) facilities which could pose a threat to the lake, is also included (Figure 1). The presence of these sites in the watershed was factored into the susceptibility analysis for the Syringa Water and Sewer. lake intake. The data used by IDEQ in determining the source water assessment delineation are available upon request.

Identifying Potential Sources of Contamination

A potential source of contamination is defined as any facility or activity that stores, uses, or produces, as a product or by-product, the contaminants regulated under the Safe Drinking Water Act and has a sufficient likelihood of releasing such contaminants at levels that could pose a concern relative to drinking water sources. The goal of the inventory process is to locate and describe those facilities, land uses, and environmental conditions that are potential sources of surface water contamination. The locations of potential sources of contamination within the delineation areas were obtained by field surveys conducted by IDEQ and from available databases.

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The watershed for Coeur d'Alene Lake covers parts of Shoshone, Benewah, Kootenai, Bonner, Latah and Clearwater Counties in north Idaho. It encompasses a number of small towns where mining and logging are the primary economic activities. The vast majority of the land in the basin is publicly owned. Most of the agricultural land in the basin is located south and west of the lake. Land in the buffer zone around the lake is mostly privately owned and has been heavily developed for year-round and summer homes. The lake itself gets intensive recreational use.

It is important to understand that a release may never occur from a potential source of contamination provided they are using best management practices. Many potential sources of contamination are regulated at the federal level, state level, or both to reduce the risk of release. Therefore, when a business, facility, or property is identified as a potential contaminant source, this should not be interpreted to mean that this business, facility, or property is in violation of any local, state, or federal environmental law or regulation. What it does mean is that the <u>potential</u> for contamination exists due to the nature of the business, industry, or operation. There are a number of methods that water systems can use to work cooperatively with potential sources of contamination. These involve educational visits and inspections of stored materials. Many owners of such facilities may not even be aware that they are located near a public water supply intake.

Contaminant Source Inventory Process

A contaminant inventory of the study area was conducted by IDEQ. It involved identifying and documenting potential contaminant sources within the Syringa Water and Sewer. Source Water Assessment Area through the use of computer databases and Geographic Information System (GIS) maps developed by IDEQ. Potential contaminant inventories conducted by water system operators whose assessment areas over lap the Syringa Water and Sewer assessment area are included in the analysis

A total 108 potential contaminant sites are located within the lake and stream buffer zones. 51 major sites are located in the watershed but outside of the buffer zone (see Table 1). There will be duplicates in some instances because a site was documented on more than one database. Most of the potential contaminant sources within delineated source water areas are clustered in and around the Coeur d'Alene.. Because of the direction of water flow in the lake it is unlikely that a contaminant release at Coeur d'Alene would affect water quality at the Syringa Water and Sewer intake. Potential contaminant sources located in the buffer zone around the lake and tributary streams include septic tanks, petroleum storage tanks, waste water land application sites, a landfill, roads, mines and a number of small business where contaminants of concern may be used (Figure 2). Table 1 lists the potential contaminants of concern and the information source.

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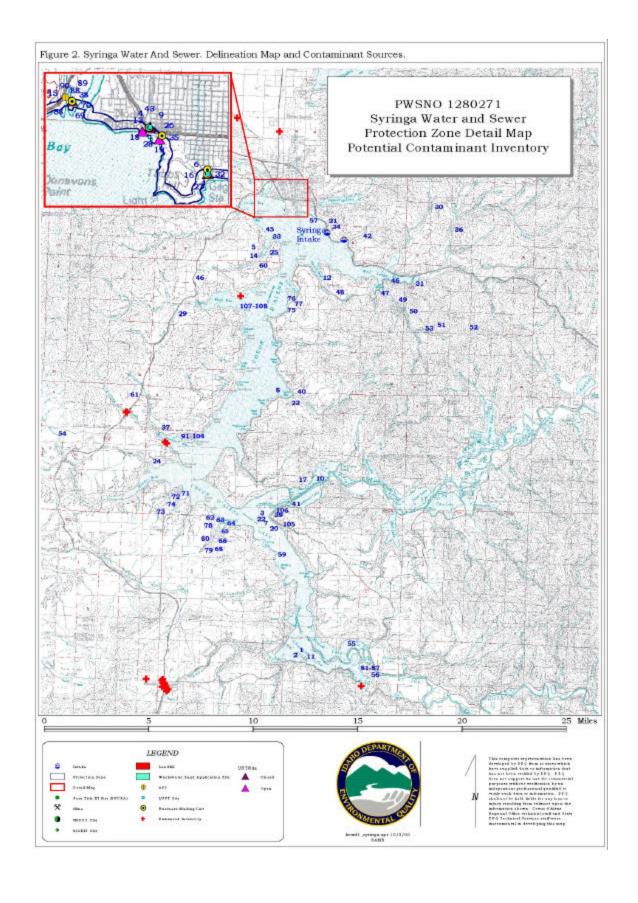


Table 1. Syringa Water and Sewer. Potential Contaminant Inventory

	inga Water and Sewer. Potentia		·	
Buffer Zone Map ID	Description	Potential Contaminant	Source of Information	
1	PARK, closed storage tank	SOC, VOC	LUST Database	
2	PARK, closed storage tank	SOC, VOC	LUST Database	
3	RESORT, closed storage tank	SOC, VOC	LUST Database	
4	Closed storage tank	SOC, VOC	LUST Database	
5	MAINTENANCE SHOP, closed storage tank	SOC, VOC	LUST Database	
6	RESORT, closed storage tank	SOC, VOC	LUST Database	
7	Closed storage tank	SOC, VOC	LUST Database	
8	RESORT, closed storage tank	SOC, VOC	LUST Database	
9	closed storage tank	SOC, VOC	LUST Database	
10	Closed storage tank	SOC, VOC	LUST Database	
11	PARK RESORT, closed storage tank	SOC, VOC	LUST Database	
12	Gas Station	SOC, VOC	LUST Database	
13	Closed storage tank	SOC, VOC	LUST Database	
14	Petroleum Storage tank	SOC, VOC	LUST Database	
15	Closed storage tank	SOC, VOC	LUST Database	
16	Closed storage tank	SOC, VOC	LUST Database	
17	SHOP, closed storage tank	SOC, VOC	LUST Database	
18	SEAPLANE SERVICE	SOC, VOC	LUST Database	
19	RESORT	SOC, VOC	LUST Database	
20	Closed petroleum storage tank	SOC, VOC	LUST Database	
21	MARINA	SOC, VOC	LUST Database	
22	RESORT	SOC, VOC	LUST Database	
23	RESORT	SOC, VOC	LUST Database	
24	RESORT	SOC, VOC	LUST Database	
25	FIRE STATION	SOC, VOC	LUST Database	
26	CITY LOT	SOC, VOC	LUST Database	
27	MARINA	SOC, VOC	Business Mailing List	
28	CAR RENTAL	SOC, VOC	Business Mailing List	
29	Excavating Contractors	SOC, VOC	Business Mailing List	
30	AUTOMOTIVE SHOP	SOC, VOC	Business Mailing List	
31	CAMPGROUNDS	microbial	Business Mailing List	
32	General Contractors	SOC, VOC	Business Mailing List	
33	Marine Contractors	SOC, VOC	Business Mailing List	
34	MINE	IOC	Business Mailing List	
35	PHOTOGRAPHER	IOC	Business Mailing List	
36	Marine Equipment & Supplies	SOC, VOC	Business Mailing List	
37	RESORT & MARINA	SOC, VOC	Business Mailing List	
38	Boat Dealership	SOC, VOC	Business Mailing List	
39	MANUFACTURING	SOC, VOC	Business Mailing List	
40	FIRE STATION	SOC, VOC	Business Mailing List	
41	WASTEWATER TREATMENT	Microbial Sugmented Solids	NPDES Database	
42	WATER FILTRATION PLANT	Suspended Solids	NPDES Database	
43	CITY SHOP	SOC, VOC	RICRIS Database	

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Table 1. Syringa Water and Sewer. Potential Contaminant Inventory

Buffer Zone Map ID	Description	Potential Contaminant	Source of Information
44	BORROW PIT	IOC	Mine Database
45	PROSPECT	IOC	Mine Database
46	GRAVEL PIT	IOC	Mine Database
47	MINE	IOC	Mine Database
48	GRAVEL PIT	IOC	Mine Database
49	MINE	IOC	Mine Database
50	MINE	IOC	Mine Database
51	PROSPECT	IOC	Mine Database
52	QUARRY	SEDIMENT	Mine Database
53	MINE	IOC	Mine Database
54	CLAY OCCURRENCE	SEDIMENT	Mine Database
55	PEAT OCCURRENCE	IOC,VOC	Mine Database
56	CLAY OCCURRENCE	SEDIMENT	Mine Database
57	MARINA	SOC, VOC	SARA Database
58	MARINA	SOC, VOC	AST Database
59	WASTEWATER LAND APPLICATION	microbial	WLAP Database
60	WASTEWATER LAND APPLICATION	microbial	WLAP Database
61	LANDFILL	microbial, SOC, VOC	LANDFILL DATABASE
62	transportation corridor	IOC, SOC, VOC	Enhanced inventory
63	drainfield	microbial	Enhanced inventory
64	drainfield	microbial	Enhanced inventory
65	drainfield	microbial	Enhanced inventory
66	drainfield	microbial	Enhanced inventory
67	drainfield	microbial	Enhanced inventory
68	small historical landfill (1972)	microbial, SOC, VOC	Enhanced inventory
69	filtered drainfield and holding tanks	microbial	Enhanced inventory
70	surface water	microbial	Enhanced inventory
71	BOAT DOCKS	SOC, VOC	Enhanced inventory
72	ROADS	SILT, SOC, VOC	Enhanced inventory
73	DRYLAND AGRICULTURE	SILT, SOC	Enhanced inventory
74	ROADS	SILT, SOC, VOC	Enhanced inventory
75	septic tank	microbial	Enhanced inventory
76	septic tank	microbial	Enhanced inventory
77	septic drainfield	microbial	Enhanced inventory
78	storage garage and workshop	SOC, VOC	Enhanced inventory
79	above ground fuel storage	SOC, VOC	Enhanced inventory
80	field drainage	SOC, VOC, Sediment	Enhanced inventory
81	septic tank	microbial	Enhanced inventory
82	septic tank	microbial	Enhanced inventory
83	septic tank	microbial	Enhanced inventory
84	septic tank	microbial	Enhanced inventory
85	septic tank	microbial	Enhanced inventory
86	septic tank	microbial	Enhanced inventory

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Buffer Zone Map ID	Description	Potential Contaminant	Source of Information
87	historical septic tanks	microbial	Enhanced inventory
88	boat service repair storage docks	SOC, VOC	Enhanced inventory
89	historical landfill	SOC, VOC, Microbials	Enhanced inventory
90	AST	fuel storage	Enhanced inventory
91	septic tank	microbial	Enhanced inventory
92	septic tank	microbial	Enhanced inventory
93	septic tank	microbial	Enhanced inventory
94	drainfield	microbial	Enhanced inventory
95	private sewer system	microbial	Enhanced inventory
96	septic tank and drainfield	microbial	Enhanced inventory
97	septic tank and drainfield	microbial	Enhanced inventory
98	septic tank	microbial	Enhanced inventory
99	septic tank	microbial	Enhanced inventory
100	septic tank and drainfield	microbial	Enhanced inventory
101	septic tank	microbial	Enhanced inventory
102	septic tank	microbial	Enhanced inventory
103	Septic and holding tank	microbial	Enhanced inventory
103	holding tank	microbial	Enhanced inventory
104	CITY SHOP		Enhanced inventory
		SOC, VOC	•
106	SEWING MACHINE FACTORY	SOC, VOC	Enhanced inventory
107	SEPTIC HOLDING TANK	MICROBIAL	Enhanced Inventory
		202 1102	•
108	FUEL STORAGE TANK	SOC, VOC	Enhanced inventory
108 Basin Map ID	FUEL STORAGE TANK Description	Potential Contaminant	Enhanced inventory Source of Information
108 Basin Map ID N-1	FUEL STORAGE TANK Description H2O TREATMENT	Potential Contaminant Suspended Solids	Enhanced inventory Source of Information NPDES Database
108 Basin Map ID N-1 N-2	FUEL STORAGE TANK Description H2O TREATMENT H2O TREATMENT	Potential Contaminant Suspended Solids Microbial	Enhanced inventory Source of Information NPDES Database NPDES Database
108 Basin Map ID N-1 N-2 N-3	FUEL STORAGE TANK Description H2O TREATMENT H2O TREATMENT H2O TREATMENT	Potential Contaminant Suspended Solids Microbial Microbial	Enhanced inventory Source of Information NPDES Database NPDES Database NPDES Database
108 Basin Map ID N-1 N-2 N-3 N-4	FUEL STORAGE TANK Description H2O TREATMENT H2O TREATMENT H2O TREATMENT MINE	Potential Contaminant Suspended Solids Microbial Microbial IOC	Enhanced inventory Source of Information NPDES Database NPDES Database NPDES Database NPDES Database
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108 Basin Map ID N-1 N-2 N-3 N-4 N-5 N-6	FUEL STORAGE TANK Description H2O TREATMENT H2O TREATMENT H2O TREATMENT MINE WATER FILTER WATER FILTER	Potential Contaminant Suspended Solids Microbial Microbial IOC Suspended Solids Suspended Solids	Enhanced inventory Source of Information NPDES Database
108 Basin Map ID N-1 N-2 N-3 N-4 N-5 N-6 N-7	FUEL STORAGE TANK Description H2O TREATMENT H2O TREATMENT H2O TREATMENT MINE WATER FILTER WATER FILTER MINE	Potential Contaminant Suspended Solids Microbial Microbial IOC Suspended Solids Suspended Solids IOC	Enhanced inventory Source of Information NPDES Database
108 Basin Map ID N-1 N-2 N-3 N-4 N-5 N-6 N-7 N-8	FUEL STORAGE TANK Description H2O TREATMENT H2O TREATMENT H2O TREATMENT MINE WATER FILTER WATER FILTER MINE MINE	Potential Contaminant Suspended Solids Microbial Microbial IOC Suspended Solids Suspended Solids IOC IOC	Enhanced inventory Source of Information NPDES Database
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108 Basin Map ID N-1 N-2 N-3 N-4 N-5 N-6 N-7 N-8 N-9 N-10	FUEL STORAGE TANK Description H2O TREATMENT H2O TREATMENT H2O TREATMENT MINE WATER FILTER WATER FILTER MINE MINE MINE MINE H2O TREATMENT	Potential Contaminant Suspended Solids Microbial Microbial IOC Suspended Solids Suspended Solids IOC IOC IOC Microbial	Enhanced inventory Source of Information NPDES Database
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108 Basin Map ID N-1 N-2 N-3 N-4 N-5 N-6 N-7 N-8 N-9 N-10 N-11 N-12 N-13 N-14	FUEL STORAGE TANK Description H2O TREATMENT H2O TREATMENT H2O TREATMENT MINE WATER FILTER WATER FILTER MINE MINE MINE H2O TREATMENT MINE MINE H2O TREATMENT MINE MINE MINE MINE MINE MINE MINE	Potential Contaminant Suspended Solids Microbial Microbial IOC Suspended Solids Suspended Solids IOC IOC IOC IOC Microbial IOC IOC IOC IOC IOC IOC IOC IOC IOC	Enhanced inventory Source of Information NPDES Database
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108 Basin Map ID N-1 N-2 N-3 N-4 N-5 N-6 N-7 N-8 N-9 N-10 N-11 N-12 N-13 N-14 N-15 N-16	FUEL STORAGE TANK Description H2O TREATMENT H2O TREATMENT H2O TREATMENT MINE WATER FILTER WATER FILTER MINE MINE MINE H2O TREATMENT MINE	Potential Contaminant Suspended Solids Microbial Microbial IOC Suspended Solids Suspended Solids IOC	Enhanced inventory Source of Information NPDES Database
108 Basin Map ID N-1 N-2 N-3 N-4 N-5 N-6 N-7 N-8 N-9 N-10 N-11 N-12 N-13 N-14 N-15 N-16 N-17	FUEL STORAGE TANK Description H2O TREATMENT H2O TREATMENT H2O TREATMENT MINE WATER FILTER WATER FILTER MINE MINE MINE H2O TREATMENT MINE H2O TREATMENT MINE	Potential Contaminant Suspended Solids Microbial Microbial IOC Suspended Solids Suspended Solids IOC	Enhanced inventory Source of Information NPDES Database
108 Basin Map ID N-1 N-2 N-3 N-4 N-5 N-6 N-7 N-8 N-9 N-10 N-11 N-12 N-13 N-14 N-15 N-16 N-17 N-18	FUEL STORAGE TANK Description H2O TREATMENT H2O TREATMENT H2O TREATMENT MINE WATER FILTER WATER FILTER MINE MINE MINE H2O TREATMENT MINE MUNICIPAL	Potential Contaminant Suspended Solids Microbial Microbial IOC Suspended Solids Suspended Solids IOC	Enhanced inventory Source of Information NPDES Database
108 Basin Map ID N-1 N-2 N-3 N-4 N-5 N-6 N-7 N-8 N-9 N-10 N-11 N-12 N-13 N-14 N-15 N-16 N-17 N-18 N-19	FUEL STORAGE TANK Description H2O TREATMENT H2O TREATMENT H2O TREATMENT MINE WATER FILTER WATER FILTER MINE MUNICIPAL INDUSTRIAL	Potential Contaminant Suspended Solids Microbial Microbial IOC Suspended Solids Suspended Solids IOC	Enhanced inventory Source of Information NPDES Database NPDES Database
108 Basin Map ID N-1 N-2 N-3 N-4 N-5 N-6 N-7 N-8 N-9 N-10 N-11 N-12 N-13 N-14 N-15 N-16 N-17 N-18	FUEL STORAGE TANK Description H2O TREATMENT H2O TREATMENT H2O TREATMENT MINE WATER FILTER WATER FILTER MINE MINE MINE H2O TREATMENT MINE MUNICIPAL	Potential Contaminant Suspended Solids Microbial Microbial IOC Suspended Solids Suspended Solids IOC	Enhanced inventory Source of Information NPDES Database

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Table 1. Syringa Water and Sewer. Potential Contaminant Inventory

Basin Map ID	Description	Potential Contaminant	Source of Information
N-23	MUNICIPAL	Microbial	NPDES Database
1-C	CAMP DUMP	Microbial, SOC, VOC	CERCLA Database
2-C	BRIDGE		CERCLA Database
4-C	CONCRETE & ASPHALT PLANT	VOC	CERCLA Database
3-C	PAINT STORE	SOC,VOC	CERCLA Database
5-C	GROCERY		CERCLA Database
6-C	DRY CLEANER	VOC	CERCLA Database
7-C	AUTO REPAIR	VOC	CERCLA Database
8-C	ROAD	SOC, SEDIMENT	CERCLA Database
9-C	MOVING COMPANY	VOC	CERCLA Database
10-C	WORK CENTER	Microbial, SOC, VOC,	CERCLA Database
11-C	WOOD TREATMENT	SOC,VOC	CERCLA Database
13-C	MINE	IOC	CERCLA Database
12-C	PHOSPHATE COMPANY	IOC	CERCLA Database
14-C	MINE	IOC	CERCLA Database
15-C	MINE	IOC	CERCLA Database
16-C	TAILINGS	IOC	CERCLA Database
17-C	MILLSITE	IOC	CERCLA Database
18-C	MILLSITE	IOC	CERCLA Database
19-C	TAILINGS	IOC	CERCLA Database
20-C	MILLSITE	IOC	CERCLA Database
21-C	MINE	IOC	CERCLA Database
22-C	MILLSITE	IOC	CERCLA Database
23-C	WOOD TREATMENT	VOC	CERCLA Database
24-C	INDUSTRIAL SITE	VOC	CERCLA Database
25-C	LANDFILL	Microbial, SOC, VOC,	CERCLA Database
26-C	RAILROAD DUMP	SOC,VOC	CERCLA Database
1-T	INDISTRIAL	SOC,VOC	Toxic Release Inventory Database
2-T	INDISTRIAL	SOC,VOC	Toxic Release Inventory Database

IOC = inorganic chemical, VOC = volatile organic chemical, SOC = synthetic organic chemical

Section 3. Susceptibility Analyses

Significant potential sources of contamination were ranked as high, moderate, or low risk according to the following considerations: hydrologic characteristics, physical integrity and construction of the intake, land use characteristic, and potentially significant contaminant sources. The susceptibility rankings are specific to a particular potential contaminant or category of contaminants. Therefore, a high susceptibility rating relative to one potential contaminant does not mean that the water system is at the same risk for all other potential contaminants. The relative ranking that is derived for each intake is a qualitative, screening-level step that, in many cases, uses generalized assumptions and best professional judgement. The following summaries describe the rationale for the susceptibility ranking.

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Intake Construction

The construction of the Syringa Water and Sewer. water system intake directly affects the raw water quality coming into the filtration plant. The intake is about 80 feet from shore at a depth, which varies with seasonal draw down of the lake level. At low water, the intake is about 59 feet below the surface. The intake is suspended over an underwater cliff. Measured along the shoreline, the location of the Syringa Water and Sewer intake is one mile from the nearest stream. In a Susceptibility Analysis calculated September 22, 2000 by DEQ staff, the intake construction score was 2, moderately susceptible, because the intake is without an infiltration gallery.

Potential Contaminant Source and Land Use

The intake also ranked in the moderately susceptible category for contamination by IOC, SOC, VOCs and microbial pollutants. Although there are numerous sites in the buffer zone and basin none of the contaminant sources inventoried are within 1000 feet of the intake. Table 2 summarizes the Susceptibility Analysis categorizations for the Syringa Water and Sewer. intake.

Table 2. Summary of Syringa Water and Sewer Susceptibility Evaluation

Intake	Contaminant Inventory			System Construction	Final Susceptibility Ranking				
	IOC	VOC	SOC	Microbials	Construction	IOC	VOC	SOC	Microbials
CdA Lake	M	M	M	M	M	M	M	M	M

H = High Susceptibility, M = Moderate Susceptibility, Low Susceptibility

IOC = inorganic chemical, VOC = volatile organic chemical, SOC = synthetic organic chemical

H* - Indicates source automatically scored as high susceptibility due to presence of either a VOC, SOC or an IOC above the Maximum Contaminant Level in the finished drinking water or the presence of a significant contaminant source within 1000 feet of the intake.

Susceptibility Summary

The Syringa Water and Sewer drinking water system is most threatened by contaminants from communities, agriculture, mining and other industries in the Coeur d'Alene-St Joe Basin entering the lake during periods of high runoff. Another concern is nutrient loading from septic systems serving the houses that line the shore.

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Section 4. Options for Source Water Protection

The susceptibility assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what the susceptibility ranking a source receives, protection is always important. Whether the source is currently located in a "pristine" area or an area with numerous industrial and/or agricultural land uses that require education and surveillance, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

An effective source water protection program is tailored to the particular local source water protection area. A community with a fully developed source water protection program will incorporate many strategies. Because the watershed feeding Coeur d'Alene Lake encompasses such a large area, Syringa Water and Sewer should participate in programs that address management of the entire basin. Partnerships with federal, state and local agencies, industry and private groups should be established and are critical to success. Due to the relatively short time involved with the movement of surface water, source water protection activities should be aimed at short-term management strategies with an emphasis on dealing with long-term future impacts from these same sources.

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Assistance

Public water supplies and others may call the following IDEQ offices with questions about this assessment and to request assistance with developing and implementing a local protection plan. In addition, draft protection plans may be submitted to the IDEQ office for preliminary review and comments.

Coeur d'Alene Regional IDEQ Office (208) 769-1422

State IDEQ Office (208) 373-0502

Website: http://www.deq.state.id.us

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References Cited

Idaho Department of Agriculture, 1998. Unpublished Data.

Idaho Division of Environmental Quality, 1994. Ground Water and Soils Reconnaissance of the Lower Payette Area, Payette County, Idaho. Ground Water Quality Technical Report No. 5. Idaho Division of Environmental Quality. December 1994.

EPA (U.S. Environmental Protection Agency), 1997, State Methods for Delineating Source Water Protection Areas for Surface Water Supplied Sources of Drinking Water, EPA 816-R-97-008, 40p.

U.S. Government Printing Office, 1995, Code of Federal Regulations, 40 CFR 112, Appendix C-III, Calculation of the Planning Distance

Idaho Department of Environmental Quality, 1999, Protecting Drinking Water Sources in Idaho.

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Attachment A

Syringa Water and Sewer Susceptibility Analysis Worksheet

The final scores for the susceptibility analysis were determined from the addition of the Potential Contaminant Source/Land Use Score and Source Construction Score.

Final Susceptibility Scoring:

- 0 7 Low Susceptibility
- 8 15 Moderate Susceptibility
- > 16 High Susceptibility

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Surface Water Susceptibility Report

Public Water System Name: SYRINGA WATER AND SEWER Source LAKE CDA

Public Water System Number 1280271

:

11/15/00 11:23:48 AM

1. System Construction		Score				
Intake structure properly constructred	YES	0				
Infiltration gallery						
or well under the direct influence of surface water	NO	2				
Total System Construction Score		2				
		IOC	voc	soc	Microbial	
2. Potential Contaminant Source / Land Use		Score	Score	Score	Score	
Predominant land use type (land use or cover)	BASALT FLOW, UNDEVELOPED, OTHER	0	0	0	0	
Farm chemical use high	NO	0	0	0		
Significant contaminant sources *	NO					
Sources of class II or III contaminants or microbials	present within the small stream segment of the					
(Score = # Sources X 2) 8 Points Maximum		8	8	8	8	
Agricultural lands within 500 feet	NO					
		0	0	0	0	
Three or more contaminant sources	YES	1	1	1	1	
Sources of turbidity in the watershed	YES	1	1	1	1	
Total Potential Contaminant Source / Land Use Score		10	10	10	10	
3. Final Susceptibility Source Score		12	12	12	12	
4. Final Sourcel Ranking		Moderate	Moderate	Moderate	Moderate	

^{*} Special consideration due to significant contaminant: The source water has no special susceptibility

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POTENTIAL CONTAMINANT INVENTORY LIST OF ACRONYMS AND DEFINITIONS

AST (Aboveground Storage Tanks) – Sites with aboveground storage tanks.

<u>Business Mailing List</u> – This list contains potential contaminant sites identified through a yellow pages database search of standard industry codes (SIC).

<u>CERCLIS</u> – This includes sites considered for listing under the <u>Comprehensive Environmental Response</u> Compensation and Liability Act (CERCLA). CERCLA, more commonly known as ASuperfund@is designed to clean up hazardous waste sites that are on the national priority list (NPL).

<u>Cyanide Site</u> – DEQ permitted and known historical sites/facilities using cyanide.

<u>Dairy</u> – Sites included in the primary contaminant source inventory represent those facilities regulated by Idaho State Department of Agriculture (ISDA) and may range from a few head to several thousand head of milking cows.

<u>Deep Injection Well</u> – Injection wells regulated under the Idaho Department of Water Resources generally for the disposal of stormwater runoff or agricultural field drainage.

Enhanced Inventory – Enhanced inventory locations are potential contaminant source sites added by the water system. These can include new sites not captured during the primary contaminant inventory, or corrected locations for sites not properly located during the primary contaminant inventory. Enhanced inventory sites can also include miscellaneous sites added by the Idaho Department of Environmental Quality (DEQ) during the primary contaminant inventory.

Floodplain – This is a coverage of the 100year floodplains.

<u>Group 1 Sites</u> – These are sites that show elevated levels of contaminants and are not within the priority one areas.

<u>Inorganic Priority Area</u> – Priority one areas where greater than 25% of the wells/springs show constituents higher than primary standards or other health standards.

<u>Landfill</u> – Areas of open and closed municipal and non-municipal landfills.

<u>LUST (Leaking Underground Storage Tank)</u> – Potential contaminant source sites associated with leaking underground storage tanks as regulated under RCRA.

<u>Mines and Quarries</u> – Mines and quarries permitted through the Idaho Department of Lands.)

<u>Nitrate Priority Area</u> – Area where greater than 25% of wells/springs show nitrate values above 5mg/l.

NPDES (National Pollutant Discharge Elimination System) – Sites with NPDES permits. The Clean Water Act requires that any discharge of a pollutant to waters of the United States from a point source must be authorized by an NPDES permit.

<u>Organic Priority Areas</u> – These are any areas where greater than 25 % of wells/springs show levels greater than 1% of the primary standard or other health standards.

Recharge Point – This includes active, proposed, and possible recharge sites on the Snake River Plain.

<u>RICRIS</u> – Site regulated under <u>Resource Conservation</u> <u>Recovery Act (RCRA)</u>. RCRA is commonly associated with the cradle to grave management approach for generation, storage, and disposal of hazardous wastes.

SARA Tier II (Superfund Amendments and Reauthorization Act Tier II Facilities) – These sites store certain types and amounts of hazardous materials and must be identified under the Community Right to Know Act.

Toxic Release Inventory (TRI) – The toxic release inventory list was developed as part of the Emergency Planning and Community Right to Know (Community Right to Know) Act passed in 1986. The Community Right to Know Act requires the reporting of any release of a chemical found on the TRI list.

<u>UST (Underground Storage Tank)</u> – Potential contaminant source sites associated with underground storage tanks regulated as regulated under RCRA.

<u>Wastewater Land Applications Sites</u> – These are areas where the land application of municipal or industrial wastewater is permitted by DEQ.

<u>Wellheads</u> – These are drinking water well locations regulated under the Safe Drinking Water Act. They are not treated as potential contaminant sources.

NOTE: Many of the potential contaminant sources were located using a geocoding program where mailing addresses are used to locate a facility. Field verification of potential contaminant sources is an important element of an enhanced inventory.

Where possible, a list of potential contaminant sites unable to be located with geocoding will be provided to water systems to determine if the potential contaminant sources are located within the source water assessment area.